

Claims

1. A polycomb protein, or an immunogenic peptide or epitope derived therefrom, or an isolated polynucleotide encoding said protein, peptide or epitope, for use as a medicament in the immunotherapy of cancer.
2. A polycomb protein, or an immunogenic peptide or epitope derived therefrom, or an isolated polynucleotide encoding said protein, peptide or epitope, according to claim 1, wherein the protein is selected from the list consisting of Enx/EZH2, EED, BMI-1, RING-1, HPH1, HPH2, HPC3 and CtBP.
3. BMI-1, or an immunogenic peptide or epitope derived therefrom, or an isolated polynucleotide encoding said protein, peptide or epitope, for use as a medicament in the immunotherapy of cancer.
4. Enx/EZH2, or an immunogenic peptide or epitope derived therefrom, or an isolated polynucleotide encoding said protein, peptide or epitope, for use as a medicament in the immunotherapy of cancer.
5. The protein, peptide, epitope or polynucleotide of any of claims 1 to 4, for use as a medicament for the treatment of a cancer selected from the list consisting of; liver, lung, breast, stomach, colorectal, cervix, prostate, bladder, pancreas, brain or ovary, or is a melanoma, lymphoma or leukaemia.
6. A vector comprising the polynucleotide of any of claims 1 to 5.
7. An integrating vector according to claim 6.
8. A non-integrating vector according to claim 6.
9. A viral vector according to either of claims 7 or 8.

10. A host cell comprising the polynucleotide of any of claims 1 to 5, or the vector of any of claims 6 to 9.

11. A host cell comprising the protein, peptide or epitope of any of claims 1 to 5.

12. The host cell of either of claims 10 or 11, wherein said cell is a dendritic cell.

13. A vaccine composition comprising the protein, peptide, epitope, polynucleotide, vector or host cell according to any of claims 1 to 12, together with a pharmaceutically acceptable excipient, carrier, buffer or adjuvant.

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14. A protein vaccine composition comprising the protein, peptide or epitope according to any of claims 1 to 5, together with a pharmaceutically acceptable excipient, carrier, buffer or adjuvant.

15. A DNA vaccine composition comprising the polynucleotide or vector according to any of claims 1 to 9, together with a pharmaceutically acceptable excipient, carrier, buffer or adjuvant.

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16. Use of the protein, peptide, epitope, polynucleotide, vector or host cell according to any of claims 1 to 12, for the manufacture of a medicament for the immunotherapy of cancer.

17. Use according to claim 16, for the manufacture of a medicament for the treatment of a cancer derived from a tissue or organ selected from the list consisting of; liver, lung, breast, stomach, cervix, prostate, bladder, pancreas, brain, colorectal, ovary, or is a melanoma, lymphoma or leukaemia.

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18. A method of treating a cancer by immunotherapy, comprising administering to a patient a vaccine composition comprising a polypeptide protein, or an immunogenic peptide or epitope derived therefrom, or an isolated polynucleotide encoding said protein, peptide or epitope.

19. A method of treating a cancer by immunotherapy, comprising administering to a patient a vaccine composition comprising a polynucleotide encoding a polycomb protein, or an immunogenic peptide or epitope derived therefrom.
20. The method of claim 19 wherein the polynucleotide is included in a vector.
21. The method of claim 20 wherein the vector is an integrating vector.
22. The method of claim 20 wherein the vector is a non-integrating vector.
23. The method of either of claims 21 or 22 wherein the vector is a viral vector.
24. The method according to any of claims 18 to 23, wherein the protein is selected from the list consisting of Enx/EZH2, EED, BMI-1, RING-1, HPH1, HPH2, HPC3 and CtBP.
25. The method according to claim 24, wherein the protein is BMI-1.
26. A method of treating a cancer by immunotherapy, comprising administering to a patient a vaccine composition comprising a host cell containing a polycomb protein, or an immunogenic peptide or epitope derived therefrom, or an isolated polynucleotide or vector encoding said protein, peptide or epitope.
27. The method of claim 26 wherein said host cell is a dendritic cell.
28. The method of any of claims 18 to 27, wherein the cancer to be treated is derived from a tissue or organ selected from the list consisting of; liver, lung, breast, stomach, cervix, prostate, bladder, pancreas, brain, colorectal or ovary, or is a melanoma, lymphoma or leukaemia.